

Fig. 1

Figure 1 illustrates the WML-based mobile device architecture, organized into several layers and components:

- User Interface Level:** Contains Main Windows and Menus, Settings, Card Rendering, and Bookmarks.
- User Agent Level:**
 - WML, WML Script, and Push APIs (101-21):** The top layer of the User Agent.
 - WML Interpreter, WML Script Interpreter and Libraries (101-22):** Processes WML content.
 - Push Subsystem (101-23):** Includes Push Handler, SI Decoder, SI Decoder, and WEXML Parser.
 - Loader APIs (101-24):** Manages the loading of content.
- Loader Level:**
 - HTTP Loader, URL Loader, Cache (101-31):** Manages the loading of content from the network.
 - Application Dispatcher, Content Dispatcher (101-32):** Manages the execution of content.
 - WSP Header Handling, WSP Adapter (101-33):** Manages the WSP protocol.
- Protocol Level (Stack):**
 - Wireless Protocol Stack (WPS) API (101-34):** The interface to the WPS protocol.
 - WPS Protocol (101-35):** Includes Wireless Session Protocol (WSP), Wireless Transaction Protocol (WTP), Wireless Transaction Layer Security (WTLS), and Wireless Datagram Protocol (WDP).
 - Wireless Datagram Protocol (WDP) API (101-36):** The interface to the WDP protocol.
- Bearer Level:** Consists of UDP.
- Utilities (Platform APIs):** A collection of system APIs including Messaging System API, Game Persistence Storage API, Logging Service API, Memory Management API, Sound Service API, Settings Service API, Math API, OS File System API, OS Services API, and Time API.

Reference numerals 101-61 through 101-60 are listed at the bottom, corresponding to the various components and APIs.

Fig. 2

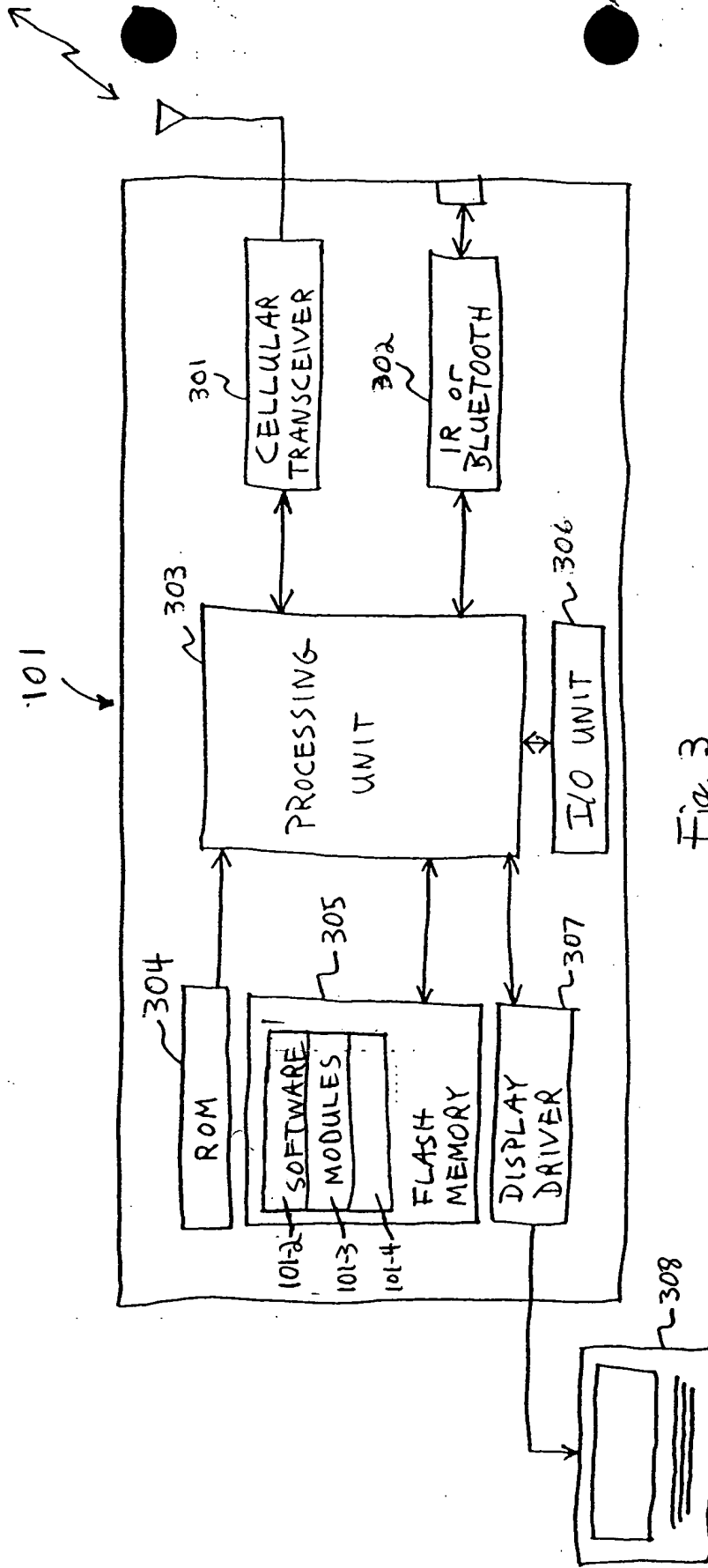


Fig. 3

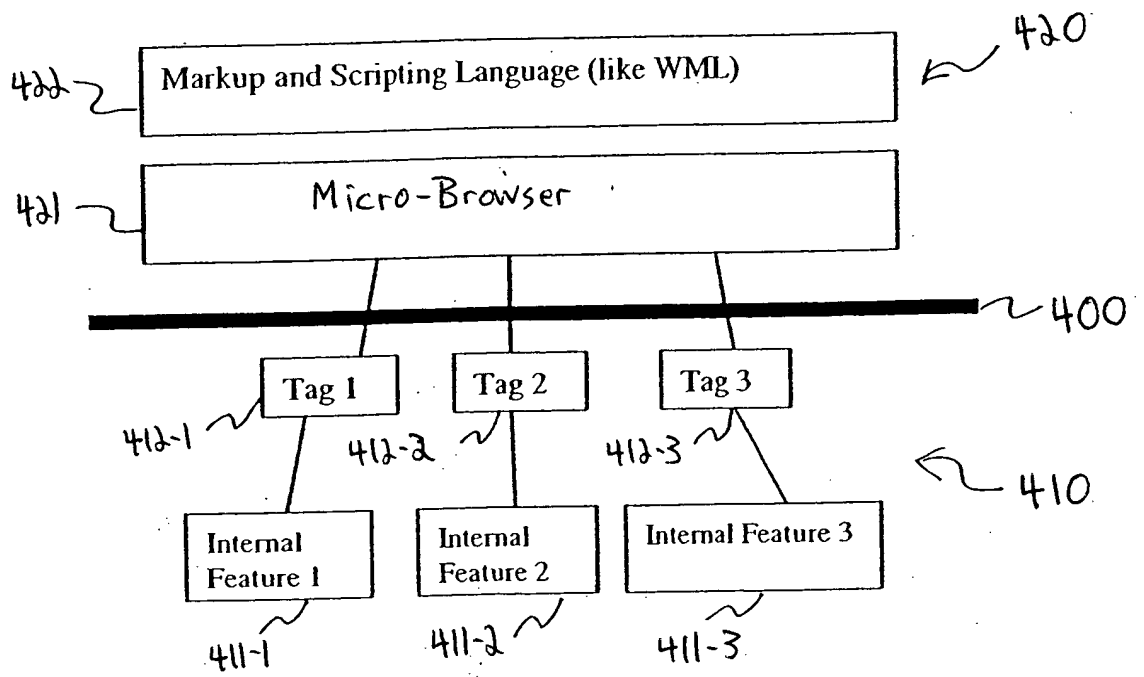


Fig. 4

Virtual Node Tree
501

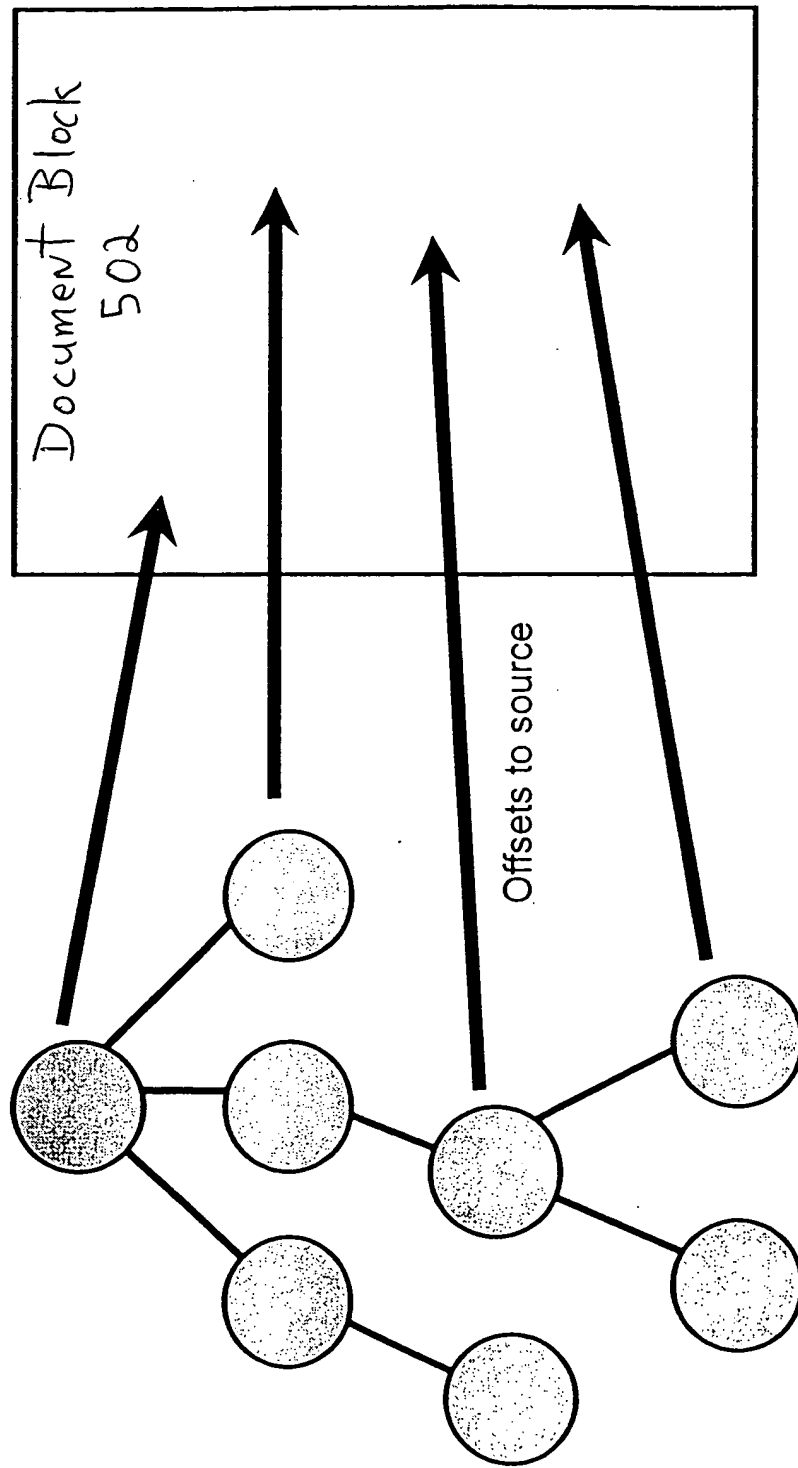
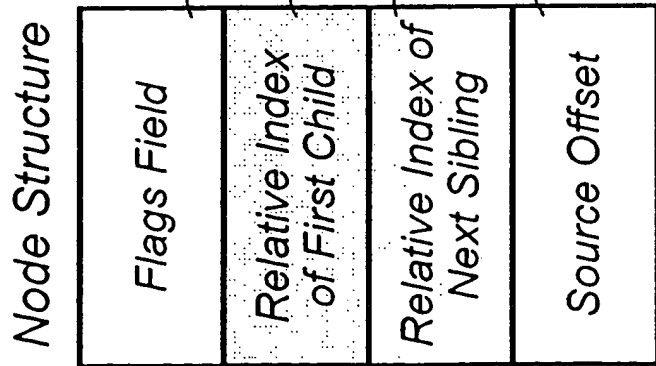


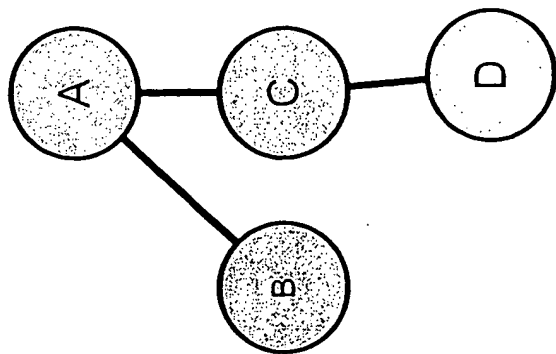
Fig. 5

Fig. 6

600



601



Compact Tree Description Block 603

Node A			Node B			Node C			Node D		
	+1	0		0	1	LC	1	-2	LC	0	-1

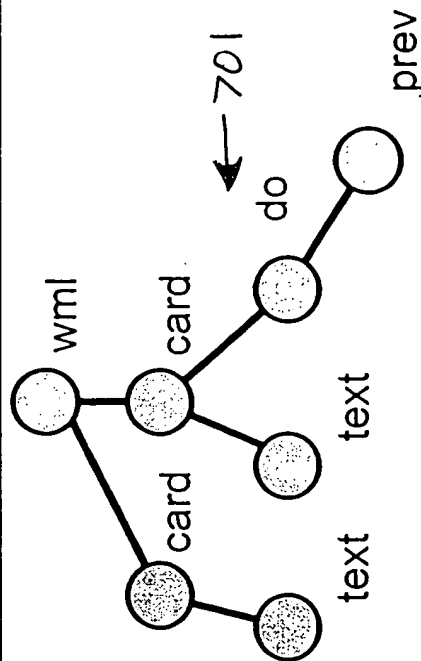
LC = Last Child Flag Set

"wml" node (root)				"card" node				"text" node				"card" node			
	+1	0	0			+1	+2	LC	0	-1	22	LC	+1	-3	44

"text" node				"do" node				"prev" node			
	0	+1	61	LC	+1	-2	78	LC	0	-1	96

Document Block 702

```
<wml><card id="card1">Welcome to WML</card>
<card id="card2">Compact tree demo<do type
="prev"><prev/></do></card></wml>
```



7
4

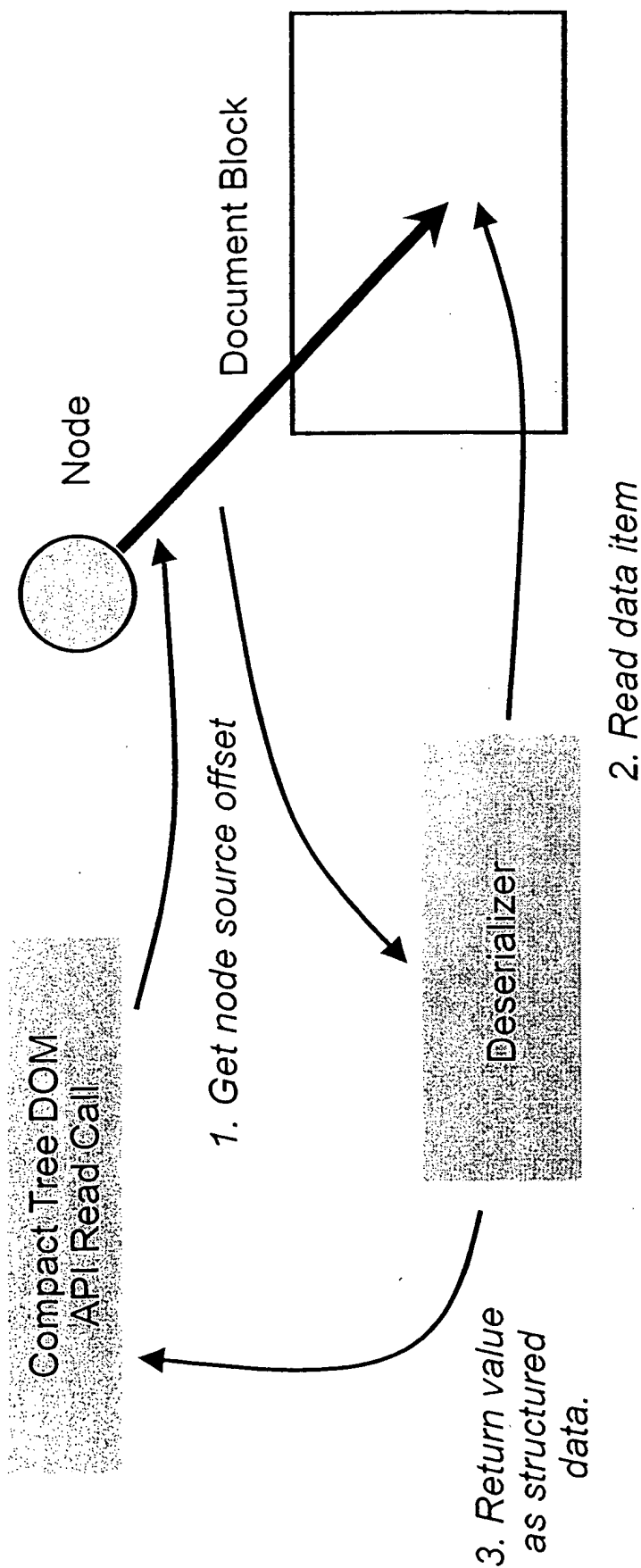


Fig. 8

